All defective A/// systems with serial numbers prior to 11600 shall be retrofitted with new memory and main logic boards. These boards will be distributed to all Level II Service Centers by Distribution. All units with serial numbers of 14000 and up will have all known changes, including the disk switch function, incorporated.

This release includes a number of design changes that have been made to the Apple /// in manufacturing to correct known quality and reliability problems. Some of these changes may be required on systems which have been shipped. The following is provided for your information. It is a list of the changes and the problems which the changes correct. Those modules which do not incorporated these changes should be purged from your inventory and sent to Distribution for further disposition.

1) Memory connectors are being replaced with Amp connectors to prevent intermittent contact with the memory board. The part numbers of the new connectors are: 516-0090 (10 pin), and 519-0093 (15 pin), two of each are required. A single 25 pin connector, 519-0094, will eventually replace these connectors late July.

2) The 74LS04 at location H8 will be replaced by a 74LS14 to correct key bounce problems.

3) The 6551 at location B1 will be replaced with a screened 6551A, part number 337-0002, to correct ACIA port timing problems.

4) Wires are added to connect J20 pin 1 (location H1) to RP10 pin 8 and RP10 pin 5 (location H4) to reduce faint vertical bars in the background of the video.

5) R16 (location N5) is changed from 75 ohms to 100 ohms, R15 (location M6) is changed from 47 to 75 ohms, and a jumper wire from RP4 pin 7 (location M8) to ground, has been added to prevent the Apple /// from overdriving the video monitor. There will be a video attenuator available shortly which will correct this problem without doing the rework on the board.

6) 7 capacitors were changed to tighter tolerance parts. The capacitors and the problems they may cause are: C20 (location A6) - power on reset; C21 (location A5) - cursor flash rate; C22 (location G12) - key bounce; C17 and C75 (location M7) - keyboard fast repeat; C69 and C70 (location A8) - $C040 sound

duration and frequency. All capacitors are part number 136-3101.

7) Mostek has supplied us with some 32K RAM which do not meet our spec. The wrong parts have a Mostek part number MK4232D-3 and all appear to have gold leads. The correct parts have a Mostek part number MK4332D-3. All inventory of replacement memory boards and RAM should be purged of the wrong parts.

In addition to the above changes, the disk switch function upgrade should be made to the Analog cards to systems with serial numbers less than 14000. The following is a list of the rework changes made on the Disk Analog Board A///.

1) On the component side, 3 trace cuts should exist at the 74LS74 (location E1):
   a) trace between pin 2 and pin 13-under 74LS74 IC socket
   b) trace between pin 13 and ground
   c) trace between pin 12 and ground

2) On the circuit side at the 74LS74 (location E1) these two traces should be cut:
   a) trace between pin 1 and pin 8
   b) the trace going from pin 10 to the Phase 1 (01).

3) On the circuit side the following jumper wires should be added:
   a) from pin 10 of the 74LS74 to pin 15 of ULN2003 (location C4)
   b) from pin 11 of the 74LS74 to Phase 1 (01)
   c) from pin 13 of the 74LS74 to pin 23 of J2
   d) from pin 13 of the 74LS74 to pin 23 of J3
   e) from pin 2 of the 74LS74 to pin 12 of the 74LS74

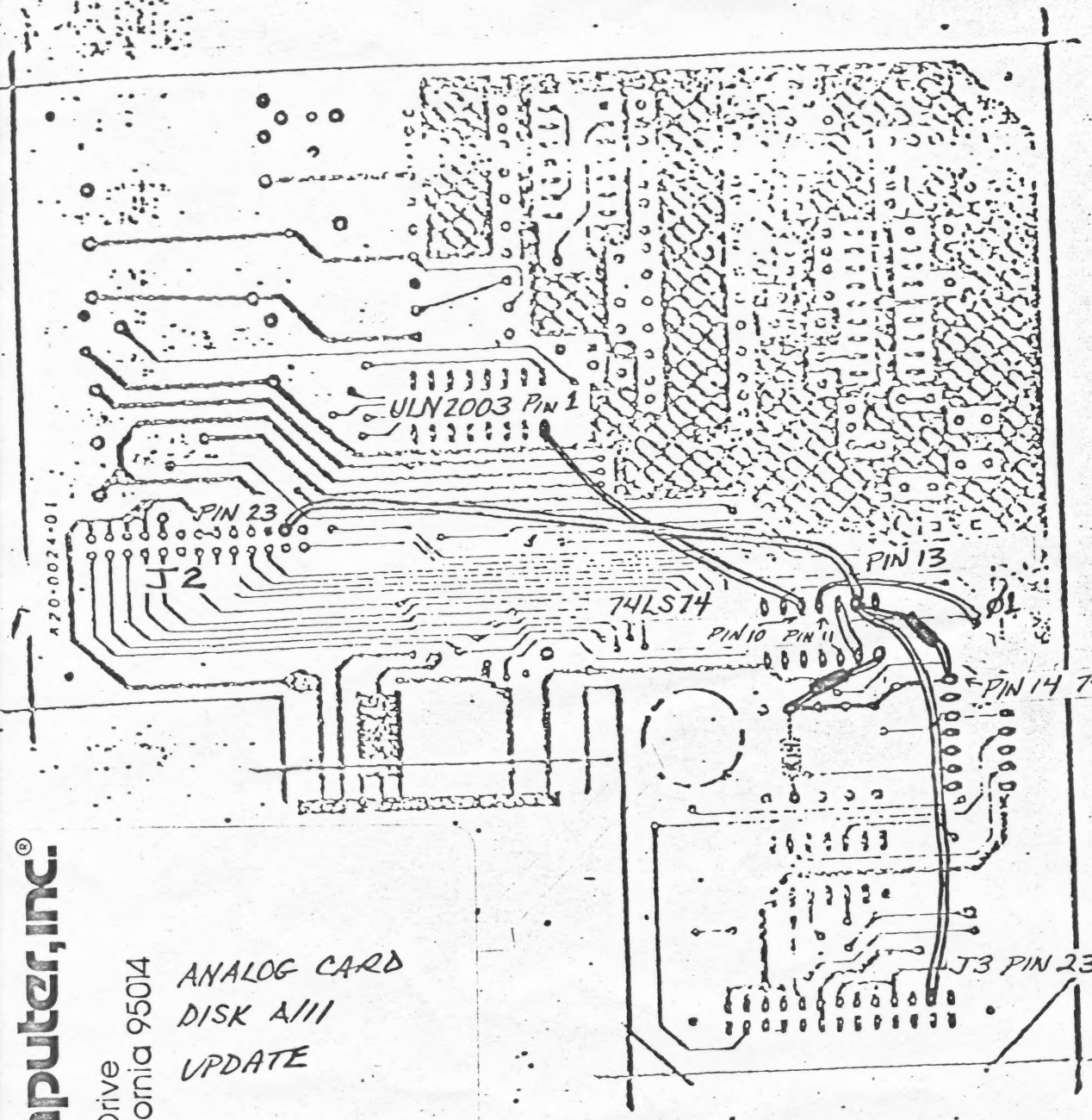
4) On the circuit side the following components should be added:
   a) a 10K ohm resistor, part number 101-4103 between pin 13 of the 74LS74 to (+5V) pin 14 of the 74LS32 (location F1),
   b) a 10K ohm resistor, part number 101-4103 from pin 1 of the 74LS74 to +5V trace of R14.
   c) R13 (location F1) should of been changed from a 1K ohm resistor to a 15K ohm resistor, part number 101-4153.

All units with serial numbers of 14000 and up will have all known changes, including the disk switch function, incorporated.

Attached are the wiring diagrams and associated schematics:

P/N 610-0105/0205	Assy, PCB, Main Logic, A///
P/N 050-0031C	Schematic, Disk Analog Board - this Rev incorporates all changes of the disk switch modifications. A schematic showing the changes is also included.
P/N 050-0039	Schematic, Main Logic, A///
Disk Switch Update	diagrams.

These diagrams have the changes incorporated in them. The current Analog Board A/// PCB Assembly diagram, P/N 650-0201, is being drafted and should be available for distribution shortly.

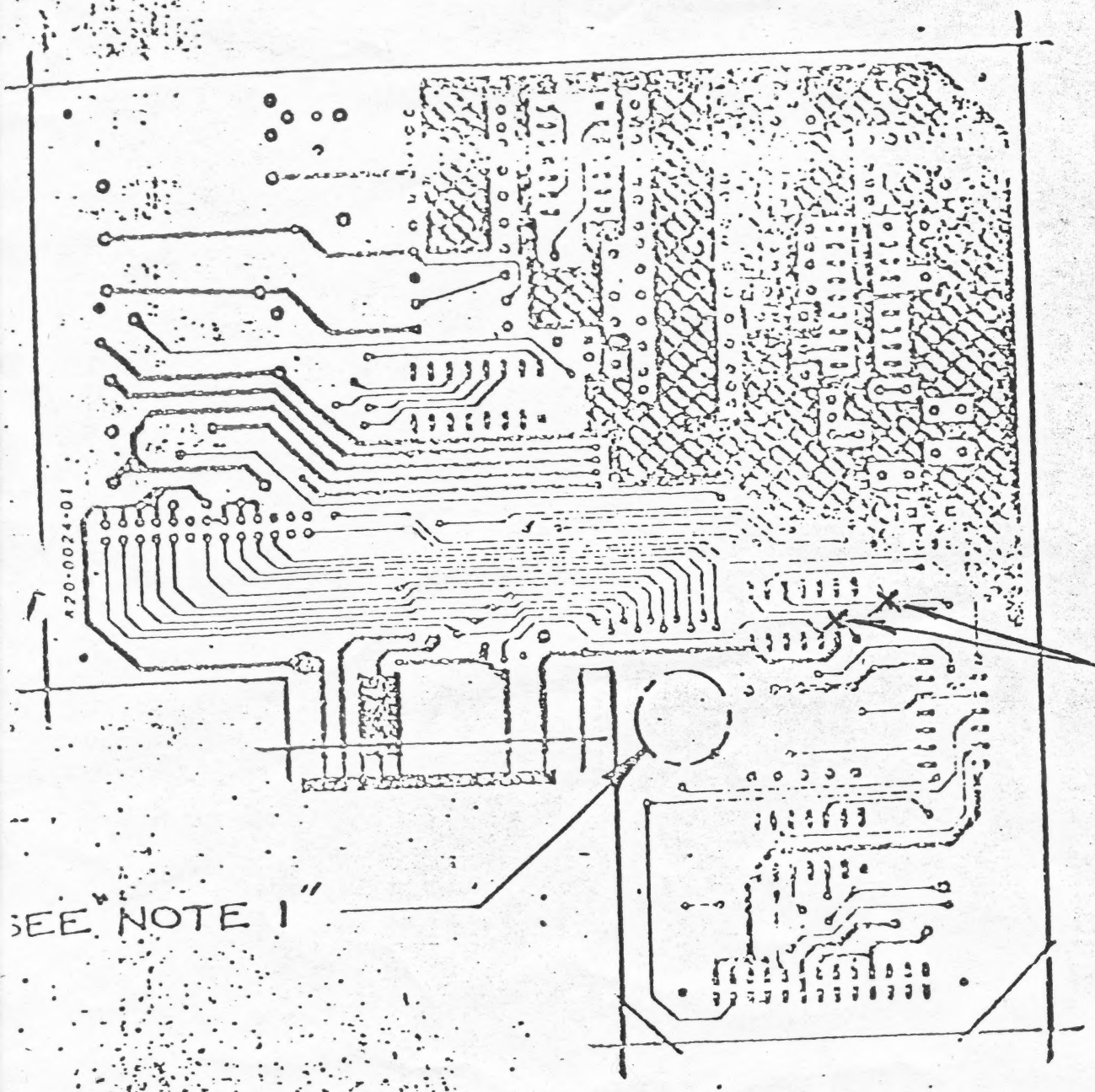


ANALOG CARD
DISK A/III
UPDATE

CIRCUIT SIDE

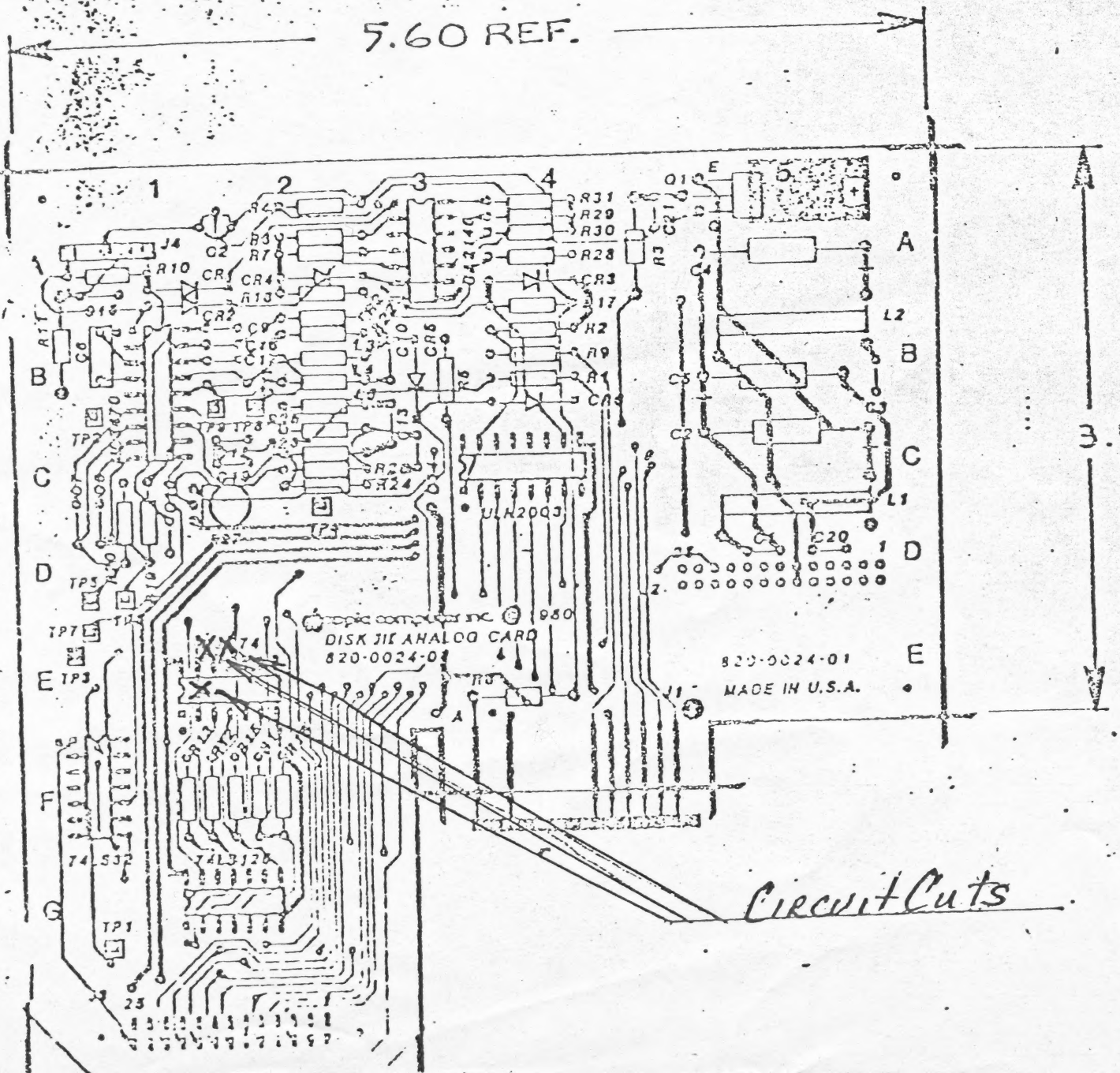
apple computer, inc.®
10260 Bandley Drive
Cupertino, California 95014

RC

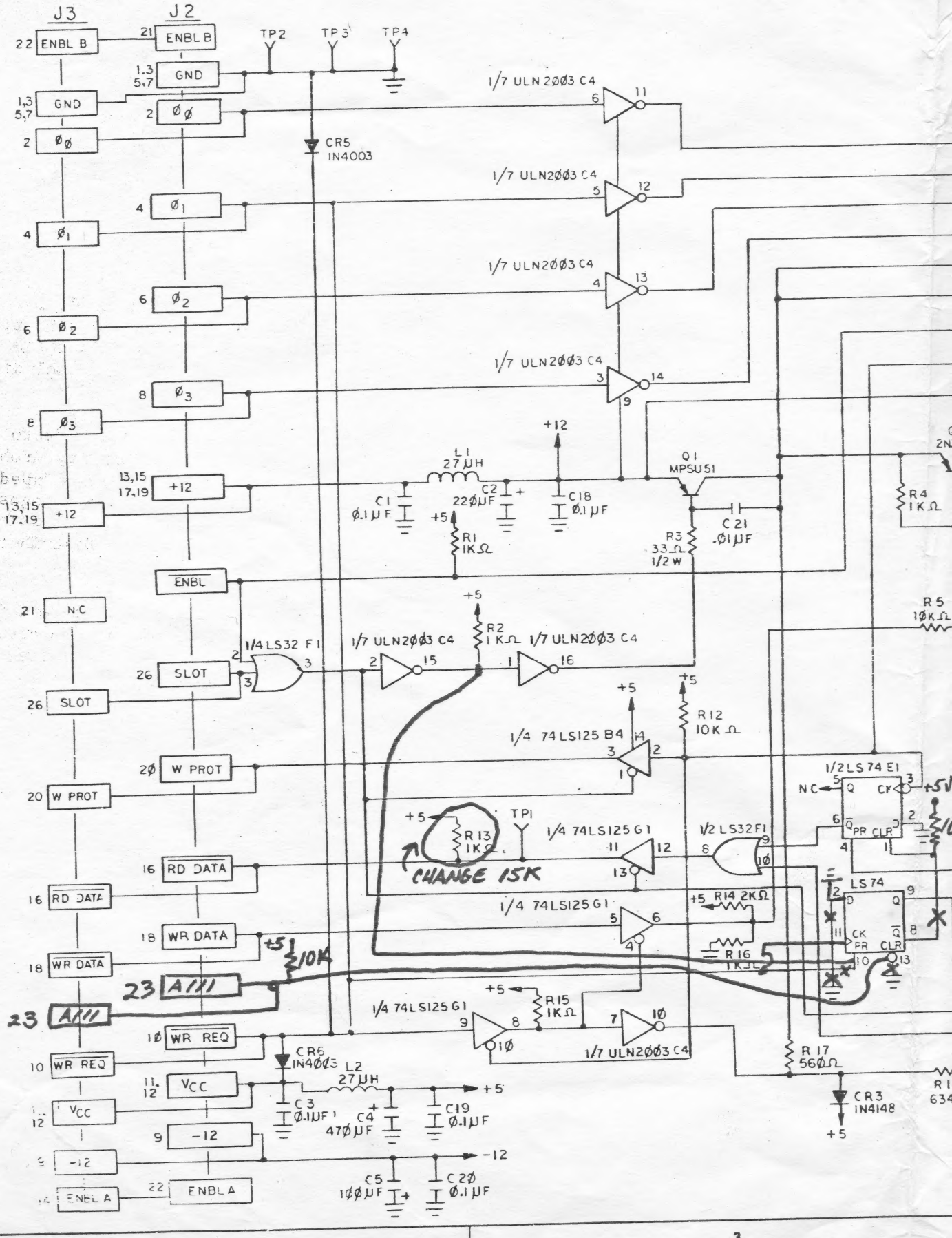


CIRCUIT SIDE

COMPONENT SIDE



NOTE: UNLESS OTHERWISE SPECIFIED 1) THIS SCHEMATIC REPRESENTS ASSY. 650-0201 AT REV. 00



REV	ZONE	ECO #	REVISION	APPD
00		423	INITIAL RELEASE	

ENGINEERING RELEASE
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J1
WP RET 4
GND 1,2 5,6 8,14
ØA P
ØB R
ØC M
ØD N
R8 560Ω ACT LED B
+12 EN 10,11,12
R9 1KΩ -MTR ON K
W PROT D
+12 13

J4
ERASE 3
R/W 5
R/W 1
CT 4

Q2 2N3906
R4 1KΩ
CR1 IN4148
CR2 IN4148
R10 15KΩ
C15 Ø.Ø1UF
R11 27ØΩ 1/2W
R5 1ØKΩ
1/2 CA3146 A3
R6 3KΩ
R7 3KΩ
MC3470 B1
+12
C9 Ø.1UF
C16 Ø.1UF
L3 47ØUF
TP8
TP9
C17 Ø.1UF
R21 887Ω
C10 1ØØPF
C11 51Ø PF
L4 470UH
R22 877Ω
C6 .22UF
+5
R19 4.7KΩ
TP5
R20 12.7KΩ
C7 33Ø PF
TP6
C8 33Ø PF
+5V
10K
L5 68UH
C13 3ØØØ PF
R23 91Ω
+5
C12 Ø.1UF
R24 1ØØKΩ
R25 1ØØKΩ
+12
R26 1ØKΩ
R27 1ØKΩ
C14 Ø.1UF -12
1/2 CA1346 A3
TP7
1/2 LS32 F1
CR4 IN4148
R18 634Ω
R31 576Ω
R28 27Ø Ω
R30 137Ω
R29 137Ω

THIRD ANGLE PROJECTION
DO NOT SCALE DRAWING

ITEM	QTY	PART NUMBER	DESCRIPTION

TOLERANCES UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
DECIMALS .X ± .XX ± .XXX ±
ANGLES XX.X ±
FRACTIONS ±
DIMENSIONS IN PARENTHESIS ARE IN MILLIMETERS

DRAWN BY DAVE JONES 5/80 DATE
CHECKED BY DATE
APPROVED BY DATE
RELEASED BY DATE

MATERIAL N/A
FINISH N/A
NEXT ASSY.

apple computer inc

TITLE SCHEMATIC
DISK ANALOG APPLE III

SIZE D
DRAWING NUMBER 050-0031-00
SCALE NONE
SHEET 1 OF 1

050-0031-00 SH 1 OF 1